

**Remarks of  
Samuel G. Bonasso  
Deputy Administrator  
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U.S. Department of Transportation  
At the  
20<sup>th</sup> Electric Vehicle Symposium & Exposition  
Long Beach, California  
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***\*\*[INSERT 'HYDRO B' SLIDE DISPLAY]***

**[Thank: Ed LaRocque, National Manager, Advanced  
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**[Acknowledge:**

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**Hiroshi Nakada, Mayor of the City of Yokohama, and;**

**Brian Williams, Deputy Mayor of the City of Los Angeles]**

**It is a special privilege to be here today representing the US DOT.**

**Secretary of Transportation Norman Y. Mineta sends his best wishes to all of you. Tomorrow, he will be giving the keynote speech at the International Partnership for the Hydrogen Economy Ministerial Meeting in Washington, DC.**

**Societal revolutions generally look larger after they are over. Looking back on revolutions, we often think in terms of the great changes that resulted. It's a little harder to discern these changes when you are in middle of a revolution.**

**Ten years ago, if you saw an electric vehicle, it was probably carrying golf bags.**

**Today, being passed by a Toyota Prius or a Civic Hybrid is no longer unusual.**

**Ten years ago, the focus was on battery technology and developing standards for charging systems.**

**Today, the long dream of hydrogen fuel cells is close to reality. Hydrogen is the energy source in the hydrocarbon fuels we burn. Some would say we are already living in a hydrogen economy.**

**So, as you look around, what you are seeing is evidence of a revolution in progress.**

**Today, our focus needs to be on:**

- **Changing our dependence upon foreign sources of energy,**
- **Improving the quality of our air and being good environmental stewards, and lastly,**
- **Working towards greater global connectivity and harmony of standards.**

**As you may know...**

**... President Bush commented on these same points on February 6<sup>th</sup> of this year, while speaking on energy independence at a gathering in Washington, DC.**

**Tied to the key goals of his Hydrogen Fuel Initiative, the President called for the country to be bold... to be innovative... and to change the way we do business. He called for America to shake its dependence upon foreign sources of energy... to improve air quality... and to improve our economic security.**

**Just as America met the challenge posed by President Kennedy in 1961 to put a man on the moon by the end of that decade, President Bush has challenged us with his Hydrogen Fuel Initiative for a child born today to drive a hydrogen powered vehicle.**

**New technology development and deployment are our keys to economic advancement – and EVS-20 has an important role to play in supporting new vehicle technologies.**

**It is important to keep in mind that successful new transportation technologies require the infrastructure as well as the components.**

**[U.S. Dept. Of Transportation]**

**The U.S. Department of Transportation is a key partner in both infrastructure and vehicle development.**

**Of our DOT priorities, SAFETY is at the top. We promulgate rules and standards for safe – roads, bridges, airports, automobiles, buses, hazmat pipelines and more.**

**Because SAFETY and SECURITY are so closely tied together, DOT also is involved with homeland security. The attacks of 9/11 used transportation systems as weapons, and since that day, DOT has been a key participant in government-wide efforts to protect our homeland.**

**The Transportation Security Administration and U.S. Coast Guard have significant roles in homeland security and in March of this year, moved from DOT to the new Department of Homeland Security. RSPA shares responsibility with DHS for the security of Hazardous materials.**

**Our safety work at DOT focuses on all modes, including air, highway, transit, rail, motor carrier, maritime, hazmat and pipeline.**

**It encompasses individual, interlinked and intermodal systems, including vehicles and infrastructure.**

**Transportation is vital not only to our national well being, but also to a vital world economy and quality of life.**

**[DOT Modal Administrations]**

**Of the nine modal administrations at DOT, several have current roles and responsibilities that relate to the development of advanced transportation technologies.**

**These are the Research and Special Programs Administration that I currently lead – known as RSPA; NHTSA, the National Highway Transportation Safety Administration; and FTA, the Federal Transit Administration.**

### **[RSPA Responsibilities]**

**RSPA has multifaceted responsibilities for pipelines, R&D, hazardous materials, emergency transportation and safety training. We are the federal regulatory authority for the nation's 2.3 million miles of gas and liquid pipelines – pipelines that carry two-thirds of the nation's consumed energy. The pipelines we regulate include approximately 600 miles of hydrogen pipelines.**

**RSPA coordinates intermodal research, manages 33 University Transportation Research Centers.**

**RSPA operates the Volpe National Transportation Systems Center where we have more than \$300 million dollars of R&D projects. The Volpe Center provides leading technical support to develop and deploy technologies and systems to the DOT operating administrations, and other Federal and state agencies.**

**In the area of hydrogen technology, they are supporting the development of consensus codes and standards; working with the Department of Energy on safety and crash worthiness; and doing collaborative work with the Department of Defense on locomotives.**

**RSPA's hazardous materials regulations affect 50,000 shippers and 800,000 daily shipments by air, truck and rail.**

**Our Office of Emergency Transportation provides crisis management support for the Secretary and coordinates government transportation in natural disasters.**

**The Transportation Safety Institute in Oklahoma City trains transportation workers in a wide range of skills for the public and private sectors.**

***\*\*[INSERT 'HYDRO A' SLIDE DISPLAY]***

***[Advanced Vehicle Technology]***

**RSPA's role within DOT is to support and coordinate transportation strategies and plans, particularly those involving advanced technologies.**



**Representing DOT, RSPA is active in partnerships for the development of advanced transportation technologies.**

**This includes both the 21st Century Truck Partnership and the California Fuel Cell Partnership, to which RSPA serves as the DOT representative. At the October meeting of the CaFCP, RSPA sponsored the Department of Defense as a new partner in the partnership. This brings the extensive hydrogen fuel cell research programs of the DOD to support the commercialization goals and activities of the partnership.**

**DOT's applied hydrogen research complements the primary role that the Department of Energy is playing at the forefront of basic hydrogen research.**

### **[NHTSA Responsibilities]**

**The National Highway Traffic Safety Administration....**

**NHTSA... led by Administrator Dr. Jeff Runge... is probably familiar to most, if not all of you.**

**Two of NHTSA's responsibilities are especially relevant to the development of advanced technology vehicles. These are the setting and enforcing of vehicle safety performance and fuel economy standards.**

**Dr. Runge made some excellent comments about safety in a speech earlier this year to the World Forum for the Harmonization of Vehicle Regulations...**

**In that speech, he warned that in our rush to reap the positive advantages of a hydrogen fuel economy -- we not sacrifice safety. Consumer confidence in advanced vehicle technology will build only when safety is balanced against harmonized industry standards, and performance-oriented regulation.**

**Now, I want to focus in on how DOT's responsibilities relate to the development of hydrogen fuel cell technology for transportation. I'll discuss this from the perspectives of the hydrogen infrastructure and hydrogen fuel cell vehicle development.**

## *[Hydrogen Fuel Infrastructure]*

### **First, Infrastructure...**

**For the hydrogen fuel infrastructure, RSPA has cognizance over codes and safety standards for delivery of hydrogen, and a regulatory role in development of the hydrogen economy.**

**This includes current and future systems for both pipelines and hazardous materials transportation safety programs.**

**Pipelines are likely to be a central aspect of the infrastructure that supports hydrogen-based transportation systems.**

**Whether they are carrying hydrogen, itself, or other fuels to feed conversion plants, pipeline integrity and safety will be important to the confidence of the American people in the hydrogen infrastructure.**

**Wide adoption of hydrogen fuel cell technology could lead to a significant expansion of the current 600 miles of hydrogen pipelines in the U.S., requiring evaluation of safety and security risks.**

**RSPA has regulatory authority for identifying and managing risks for the safe transport of hazardous materials...**

**...this applies to hydrogen, in compressed or cryogenic forms; whether in bulk transport or carried in vehicles as fuel.**

**The increased transport of hydrogen will bring higher risks of incidents and consequences.**

**RSPA's role in supporting local emergency response for hazmat and pipeline incidents will come into play with the adoption of hydrogen as a transportation fuel.**

**RSPA has established a partnership with the nation's fire marshals to enhance security of the pipeline infrastructure through training for fire services and public outreach and education.**

**The importance of this is highlighted by the authority of fire marshals for safety certification of new hydrogen refueling stations, such as one opened last year in California.**

**We will need to ensure that the safety concerns of state and local safety officials... the first responders... are reflected in our plans for hydrogen-based technology.**

**[Hydrogen Fuel Vehicle Issues]**

**On the vehicle side:**

**The National Highway Traffic Safety Administration has responsibilities for motor vehicle safety standards.**

**This includes performance standards to ensure a baseline level of fuel integrity under crash conditions.**

**NHTSA will need to develop and promulgate these performance standards before fuel cell vehicles can be fully commercialized. They will also be challenged to offer safety guidance as we progress toward the hydrogen economy.**

**The time for this work is now -- in connection with prototype deployments.**

**NHTSA, of course, also has responsibilities for promulgating CAFÉ standards, for motor vehicle manufacturers. These will be greatly impacted by hydrogen fuel cell introduction.**

**Other DOT administrations will have roles in the development and deployment of hydrogen technology:**

**Federal Transit Administration has a pilot project for fuel cell bus development.**

**As fuel cells are adapted to other transportation modes there will be involvement by Federal Railroad Administration and the Federal Motor Carrier Safety Administration.**

***[The Road Ahead]***

**So, as you can see, we are in the midst of a revolution.**

**As we move forward with hydrogen, it must be with SAFETY as a priority, and reliability and availability as a goal..., both in the transport of hydrogen, and in the vehicles it will power.**

**DOT will be working with you as we move toward the global realization of a hydrogen economy and hydrogen fuel cells in transportation ... in Los Angeles, California; Reggio Emilia, Italy; or Yokohama, Japan.**

**We can take pride in the progress being made by all of our partners. We are moving toward energy security, a cleaner environment, greater global connectivity and harmony in international standards.**

**Like the industrial revolution, one day we will look back at the advances made in freeing hydrogen and its abundant clean energy and say – “oh, that’s how it happened!”**

***[END]***